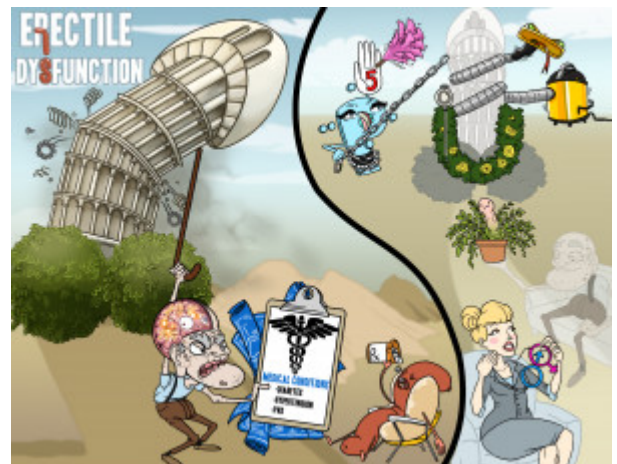


## Erectile Dysfunction

Erectile dysfunction is the inability to achieve or maintain an erection for intercourse. Causes of erectile dysfunction include testosterone deficiency, medical conditions, medications, and psychological factors. Drug therapy includes phosphodiesterase type 5 inhibitors to relax smooth muscles for increased blood flow to the corpus cavernosum. Vacuum constriction devices, intraurethral devices, and penile implants may be used to achieve an erection. Sexual counseling should include the patient's partner and begin prior to medical treatment.



PLAY PICMONIC

### Cause/Mechanism

#### Age-Related Changes

##### Older Adult

Erectile dysfunction may be associated with age-related changes, such as testosterone deficiency. Age-related changes in males include an increase in prostate size, decrease in sperm production, and decrease in testicular size and firmness. These symptoms of decreased testosterone production lead to low libido and erectile dysfunction.

#### Psychological

##### Psychological-brain

Psychological issues may lead to erectile dysfunction. Fear of failure to perform causes stress and anxiety. Stress, depression, and anxiety affects the patient's ability to sustain an erection.

#### Medical Conditions

##### Medical Conditions

Various medical conditions may cause erectile dysfunction. Middle-age men are particularly affected. Erectile dysfunction may be related to medical conditions such as diabetes, hypertension, and peripheral vascular disease (refer to the Picmonic on "Peripheral Arterial Disease").

#### Drug-Induced

##### Drugs

Erectile dysfunction may be a side effect of various medications. Medications include antihypertensives, tricyclic antidepressants, beta blockers, and diuretics. Alcohol, nicotine, and recreational drugs may decrease the patient's sperm count and contribute to erectile dysfunction. Instead of discussing low libido or erectile dysfunction with a healthcare provider, the patient may decide to stop taking their medications in order to avoid problems with sexual functioning. If drug-induced erectile dysfunction occurs, notify the healthcare provider for medication alternatives.

### Assessment

#### Sexual Dysfunction (Unable to Maintain Erection)

##### Limp-wiener

Erectile dysfunction is characterized as the inability to achieve or maintain an erection firm enough for satisfactory sexual activity. The causes of sexual dysfunction may be related to age, medical conditions, medications, or psychological factors. Management of erectile dysfunction requires a thorough

assessment of the patient's sexual, health, and psychosocial history.

## Interventions

### Phosphodiesterase Type 5 (PDE5) Inhibitors

[Phosphorus-P Duster with \(5\) hand in Inhibiting-chains](#)

Phosphodiesterase type 5 (PDE5) inhibitors are indicated for patients with erectile dysfunction. The medications increase blood flow to the corpus cavernosum by relaxing smooth muscles. Examples of PDE5 inhibitors include sildenafil, tadalafil, vardenafil, and avanafil. Since they both cause significant hypotension, avoid concurrent administration of PDE5 inhibitors with nitrate drugs.

### Vacuum Constriction Devices

[Vacuum Constrictor](#)

Vacuum constriction devices pull blood into the corporeal body to produce an erection. Examples of vacuum constriction devices that retain venous blood for maintaining an erection include a penile ring or constrictive band.

### Intraurethral Devices

[In-U-Wreath Device](#)

In combination with vasoactive drugs, intraurethral devices enhance blood flow into the penile arteries. Vasoactive medications are administered as a topical gel, intracavernosal self-injection, or insertion of a pellet into the urethra using a medicated urethral system for erection (MUSE) device. Examples of vasoactive medications include papaverine, alprostadil (Caverject), and phentolamine (Vasomax).

### Penile Implants

[Penis In-plants](#)

Since these surgical procedures are highly invasive and may cause complications, penile implants are indicated for patients experiencing severe erectile dysfunction. Complications related to penile implants include mechanical failure, infection, and erosion. Semi-rigid or inflatable penile prostheses are implanted into the corporeal bodies to sustain an erection firm enough for intercourse.

## Considerations

### Sexual Counseling

[Sex-symbol Counselor](#)

Since many patients affected by erectile dysfunction are uncomfortable discussing their issues, sexual counseling is recommended to assess and address the patient's psychosocial status. Sexual counseling should be initiated prior to beginning medical treatment for erectile dysfunction. Since sexual dysfunction affects relationships, the patient's partner should be included during counseling sessions.